Figure 13: Examples of Diagnostic Effector Molecules

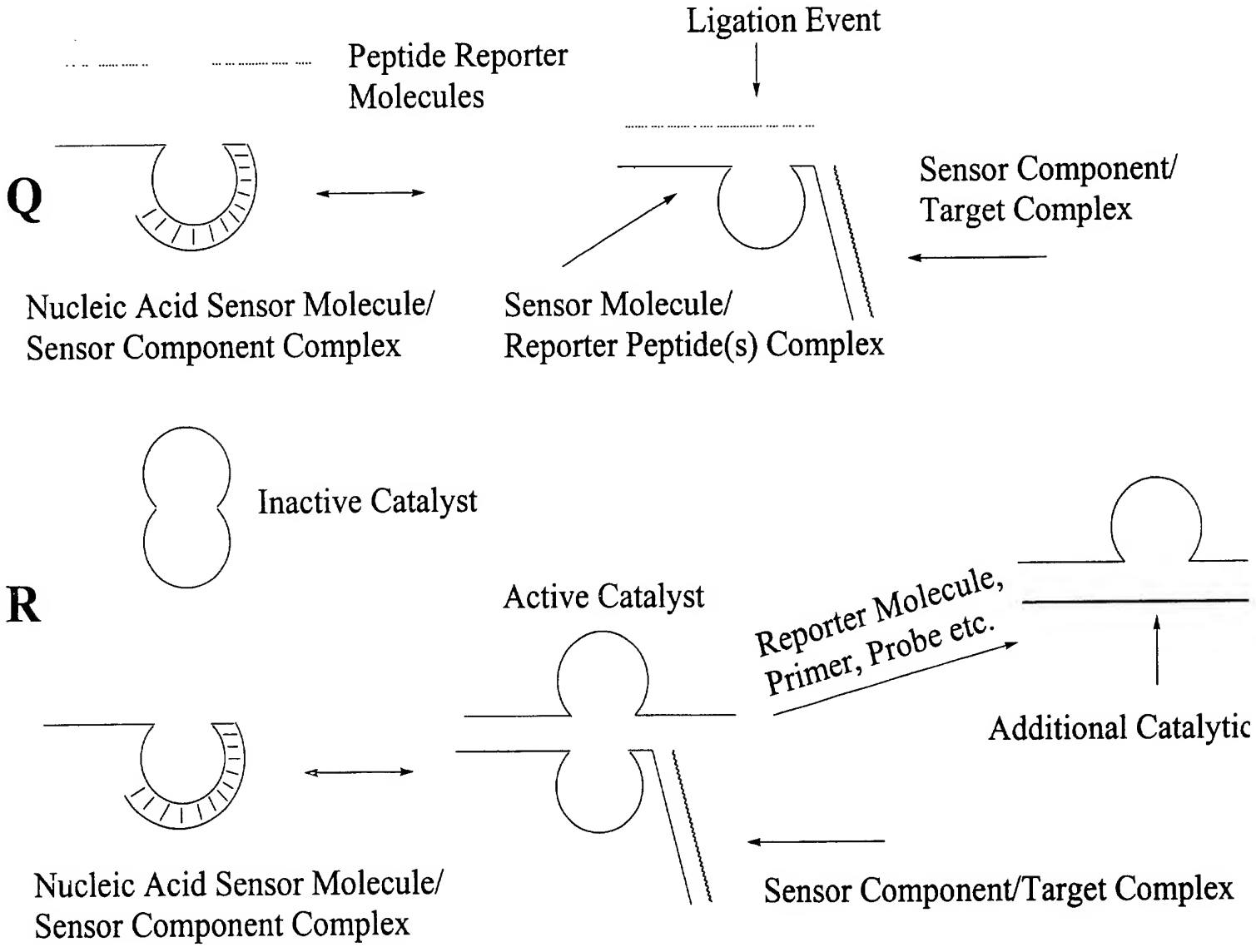


Figure 17b: Auto-ligation Nucleic Acid Sensor Molecules - Ligand Dependent

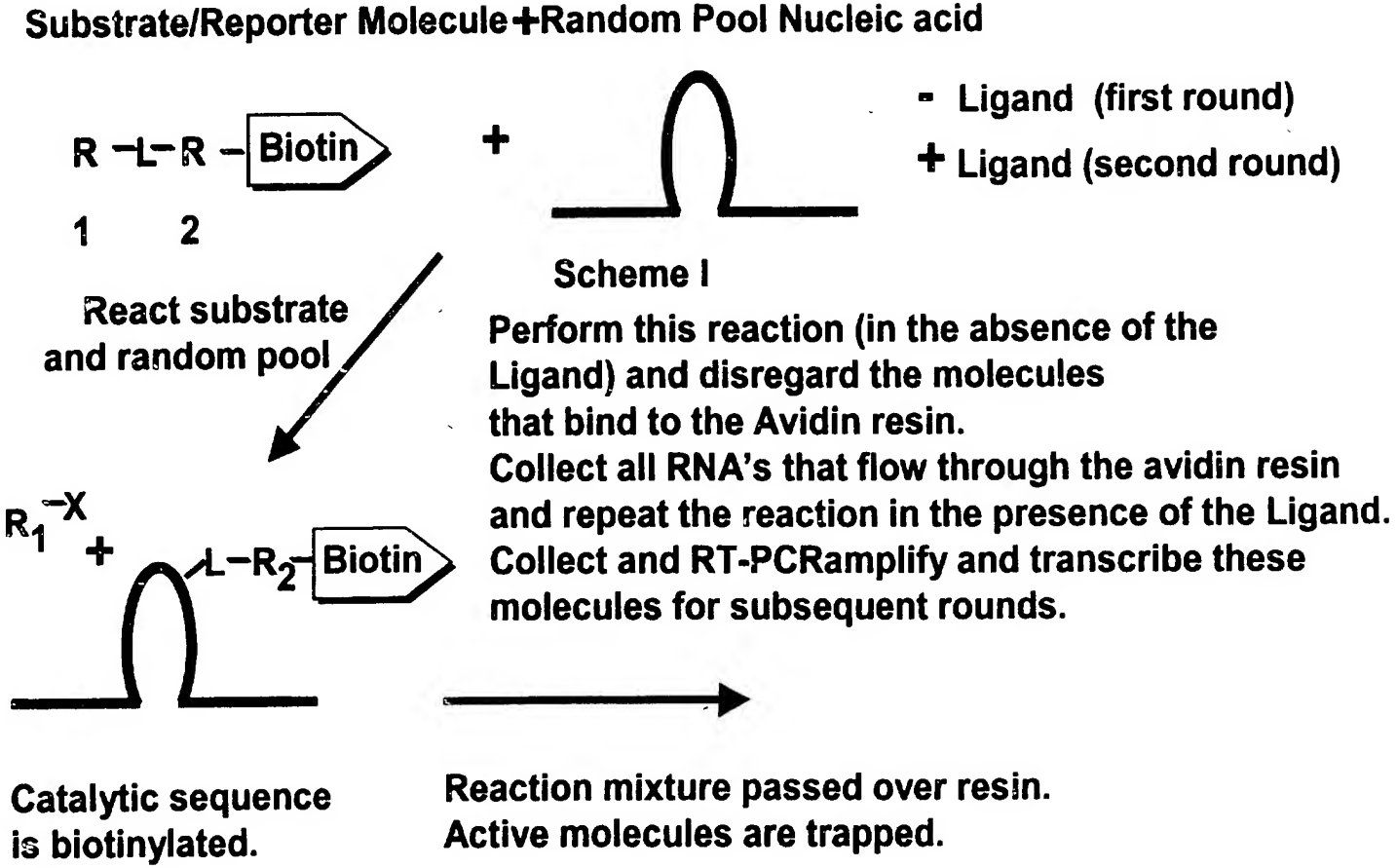
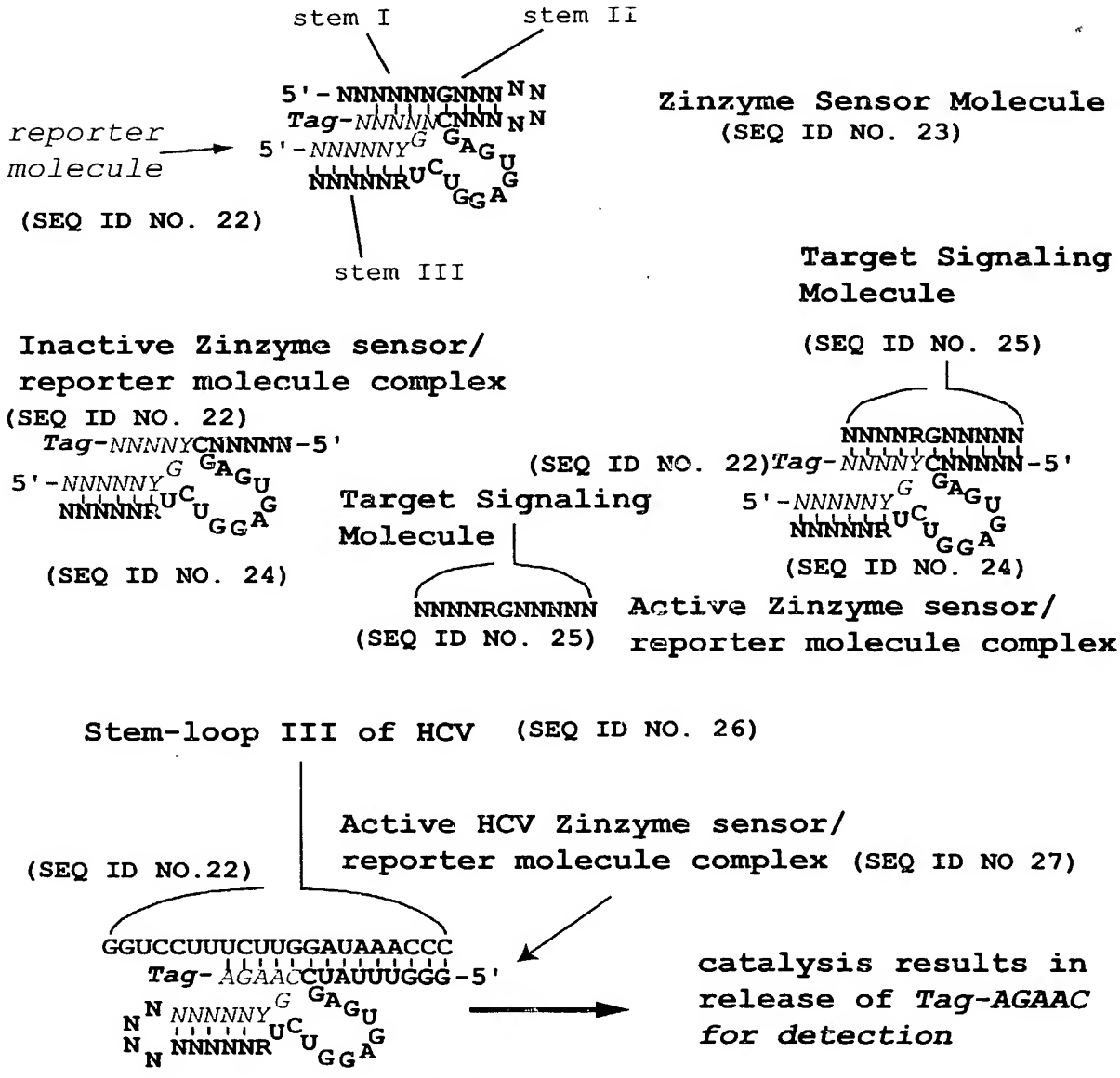


Figure 19: Zinzyme Sensor Molecule for detection of Nucleic Acid



Amplification of signal via use of protein enzyme conjugate

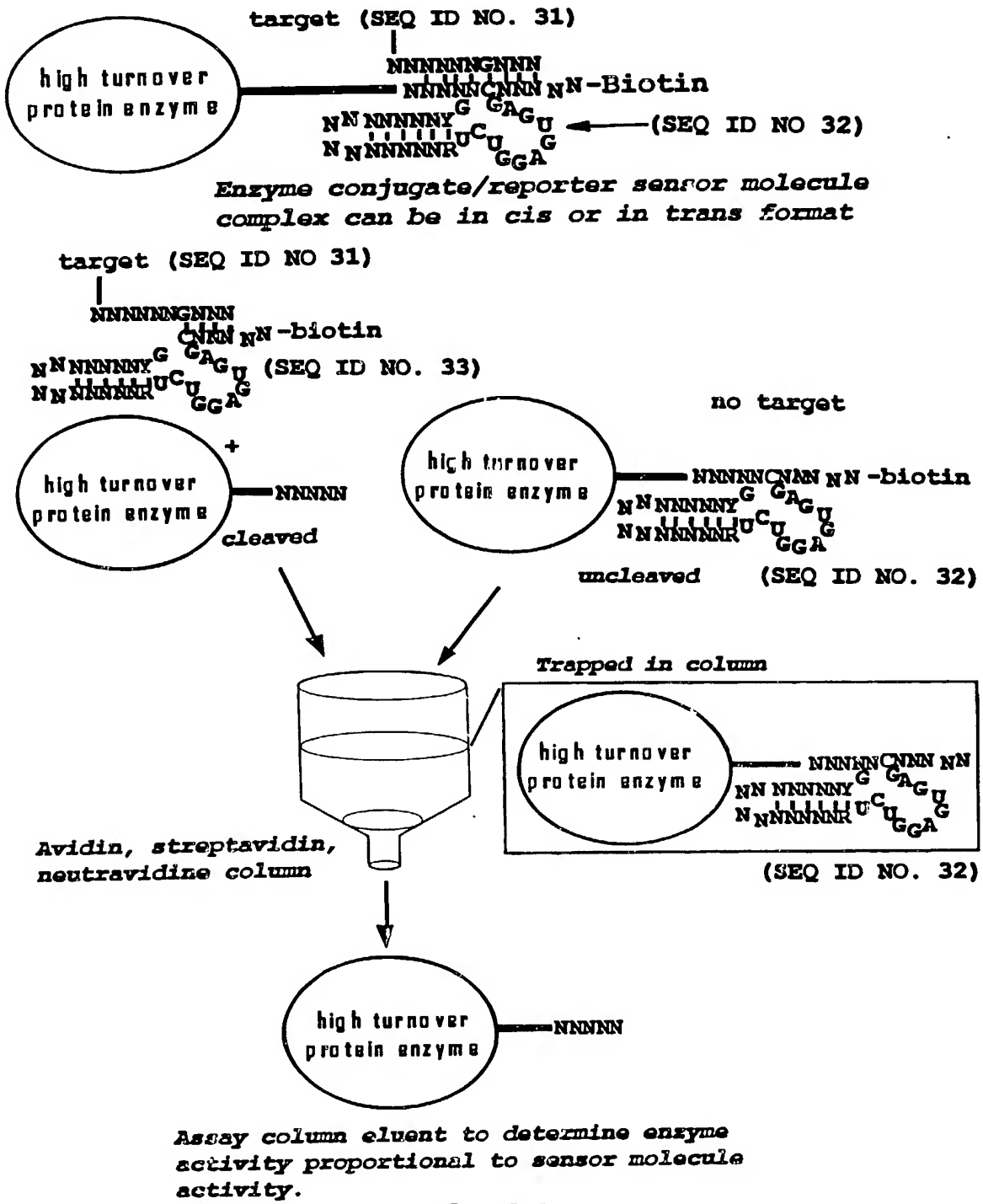
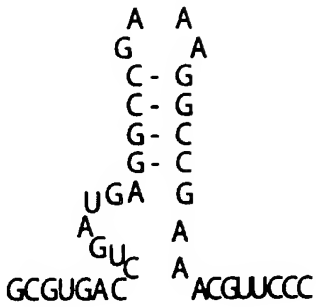


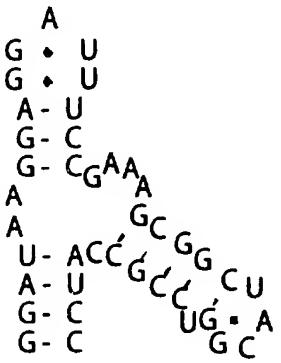
FIG. 22

Figure 28: Erk modulated Nucleic Acid Sensor Molecule



HAMMERHEAD (HH)

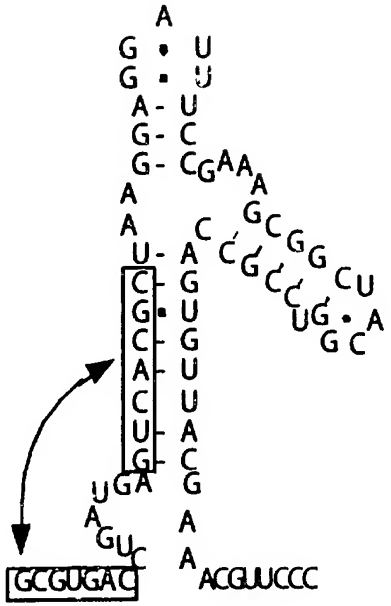
(SEQ ID NO. 40)



ERK SENSOR COMPONENT

K_D=300 pM

(SEQ ID NO. 41)



EHH1.3 sensor molecule

K_D=570 nM

(SEQ ID NO. 42)

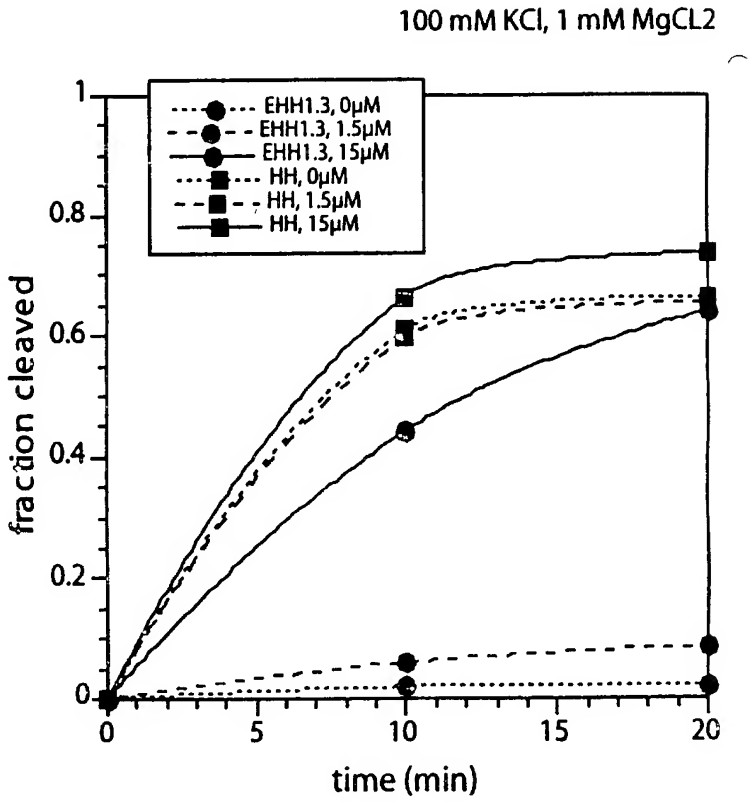


Figure 37A

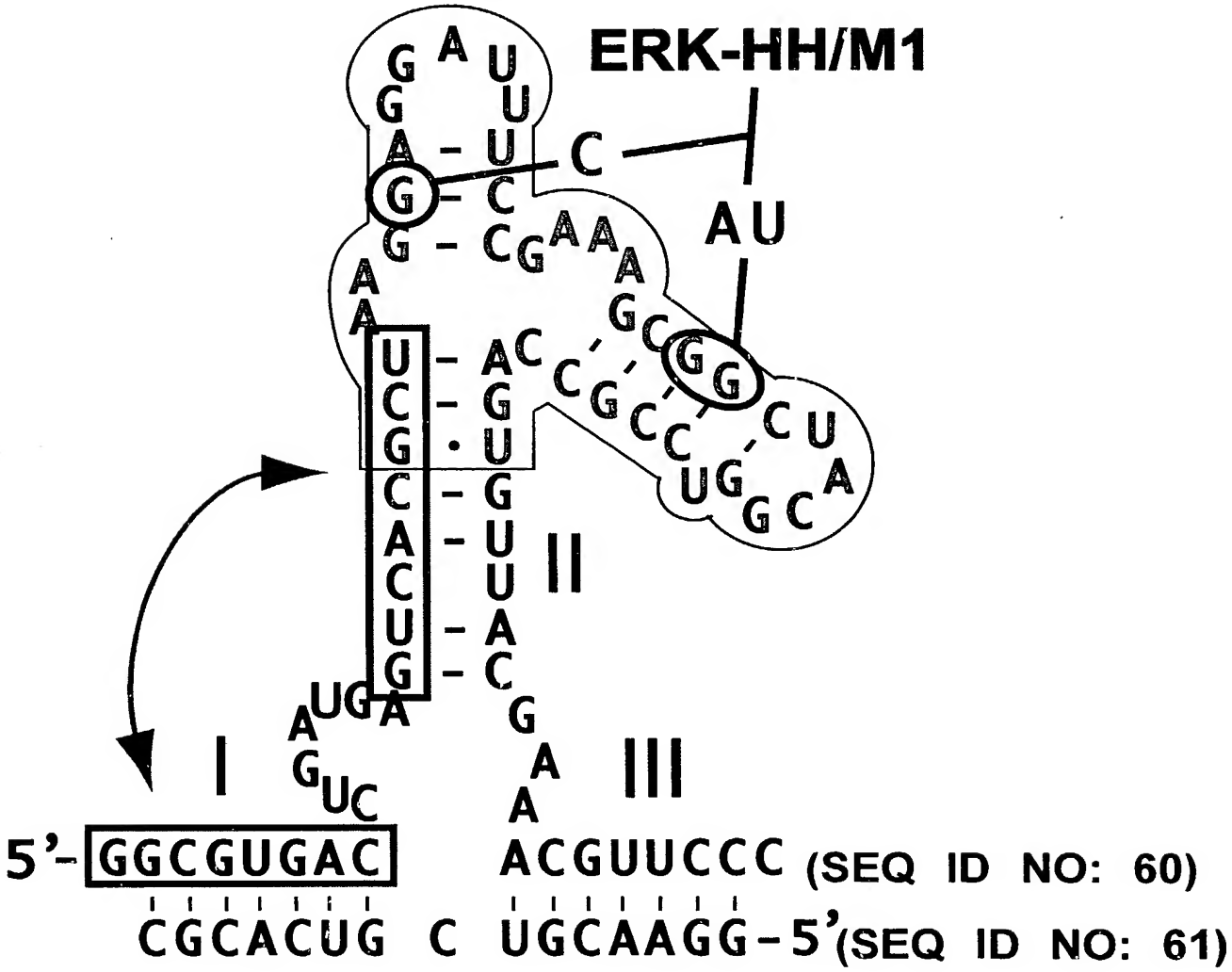

ERK-HH/M1
I
II
III
5'-GGCGUGAC
ACGUUCCC (SEQ ID NO: 60)
CGCACUG C UGCAAGG-5' (SEQ ID NO: 61)

Figure 37C

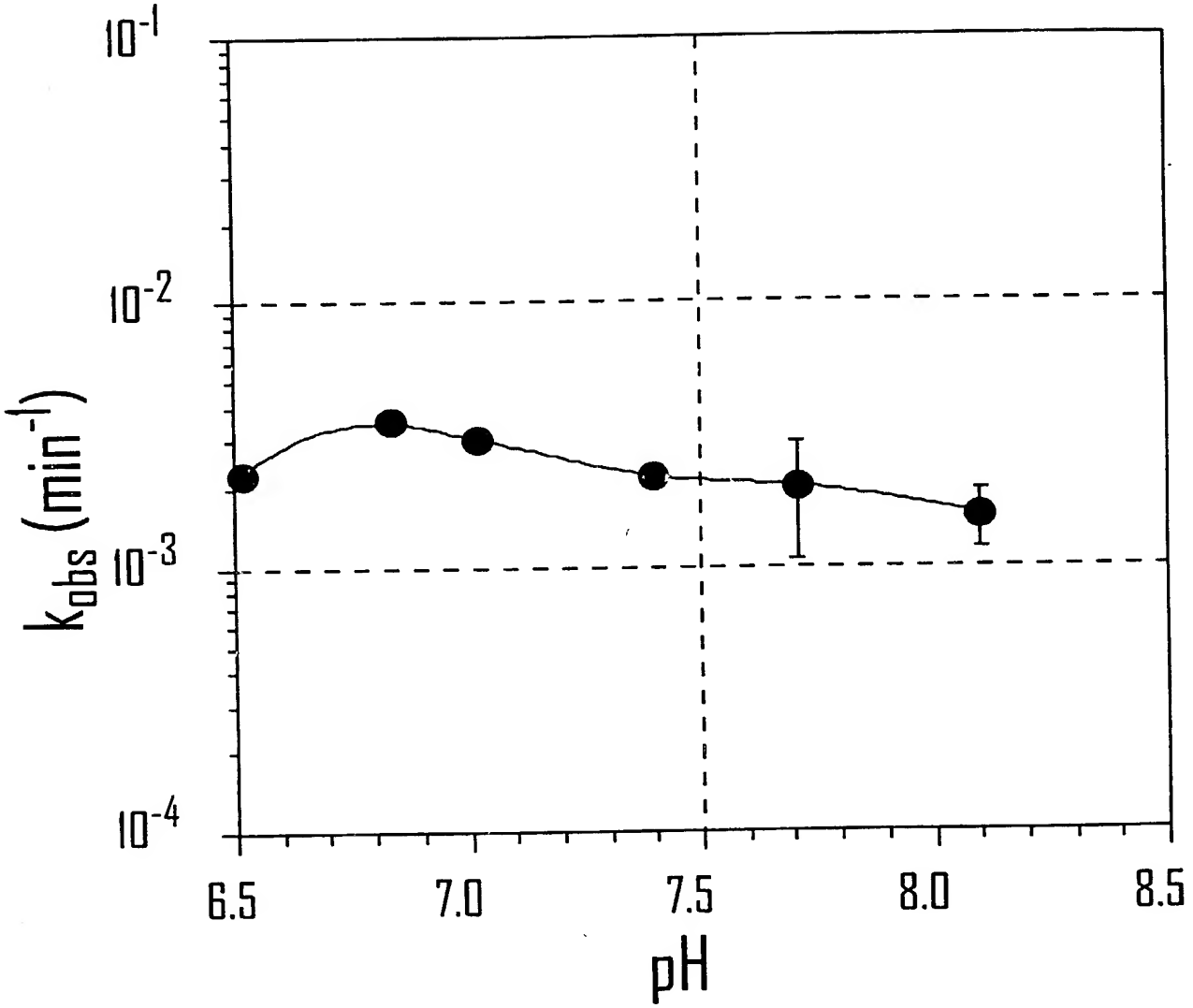


Figure 38

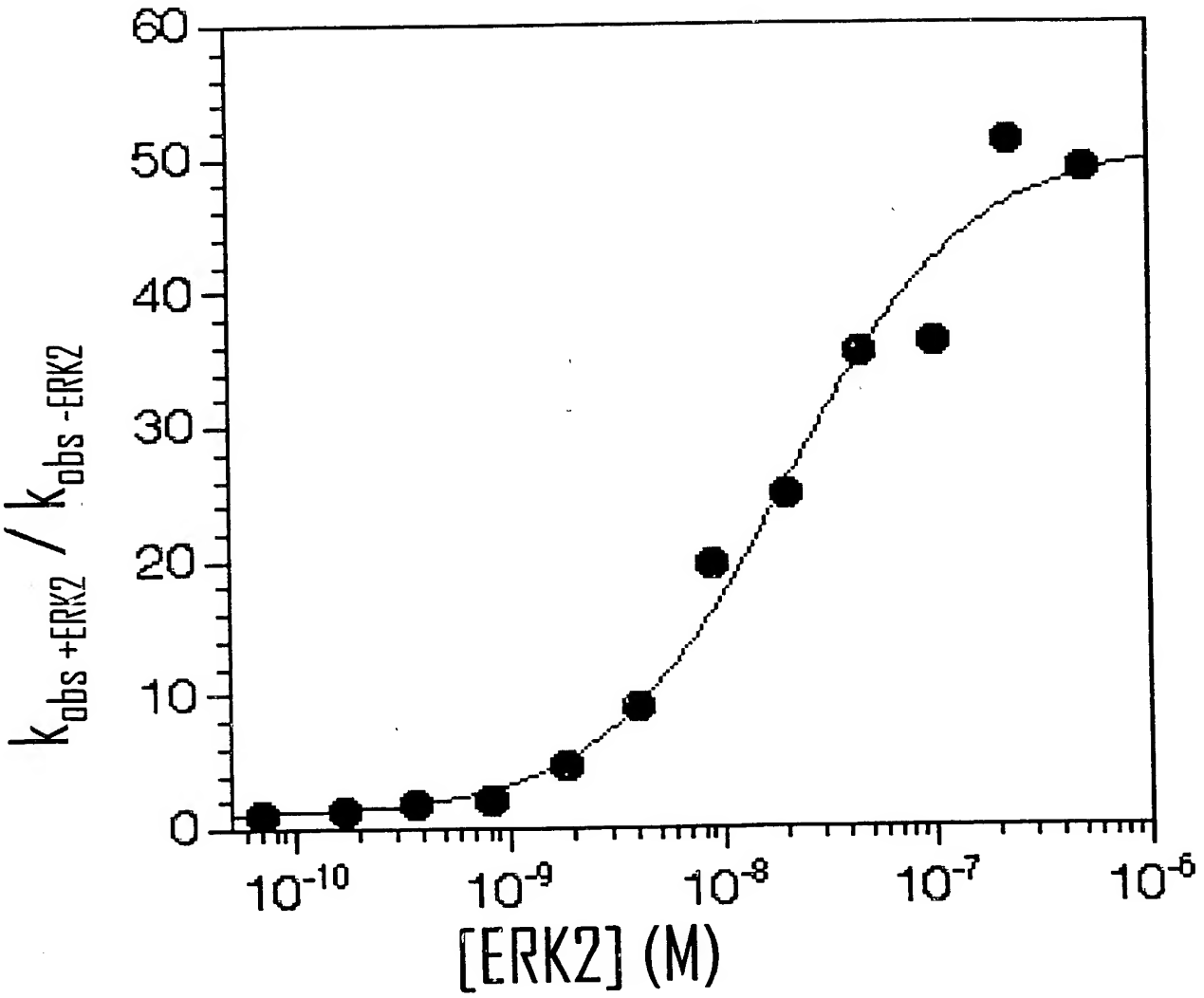
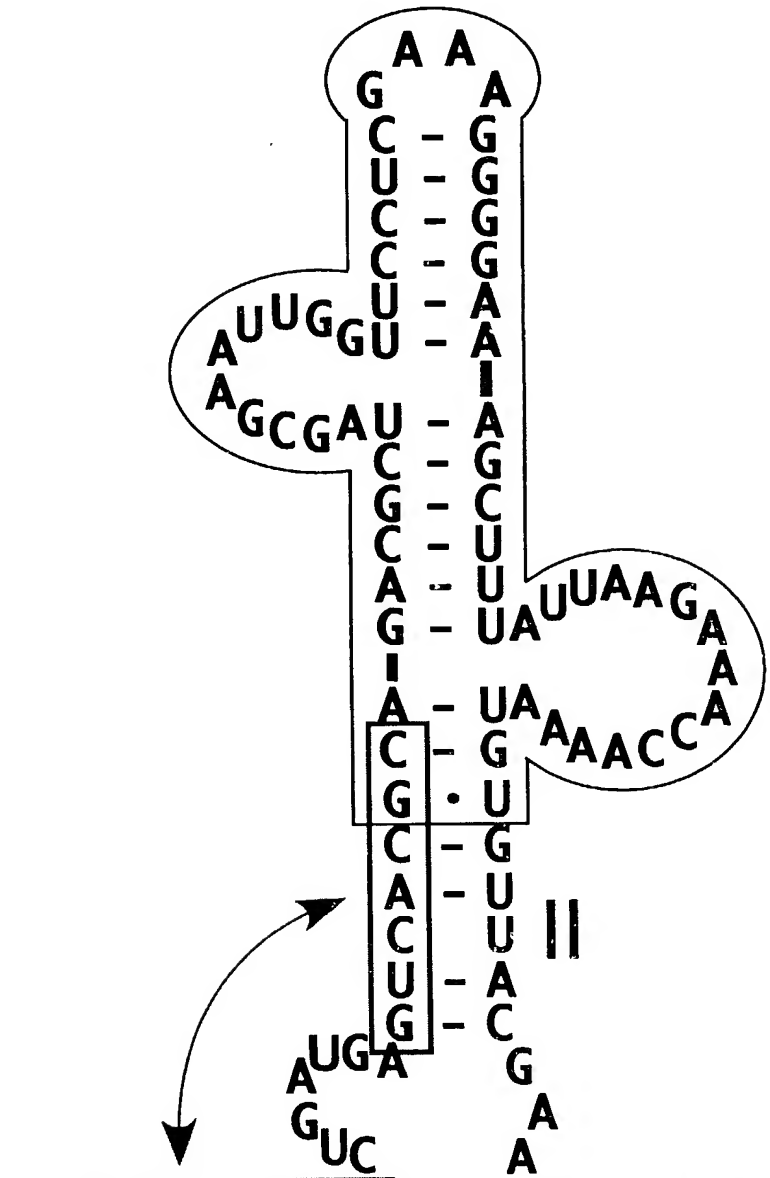

60
50
40
30
20
10
0
$k_{obs\ +ERK2}$ / $k_{obs\ -ERK2}$
10^{-10}
10^{-9}
10^{-8}
10^{-7}
10^{-6}
[ERK2] (M)

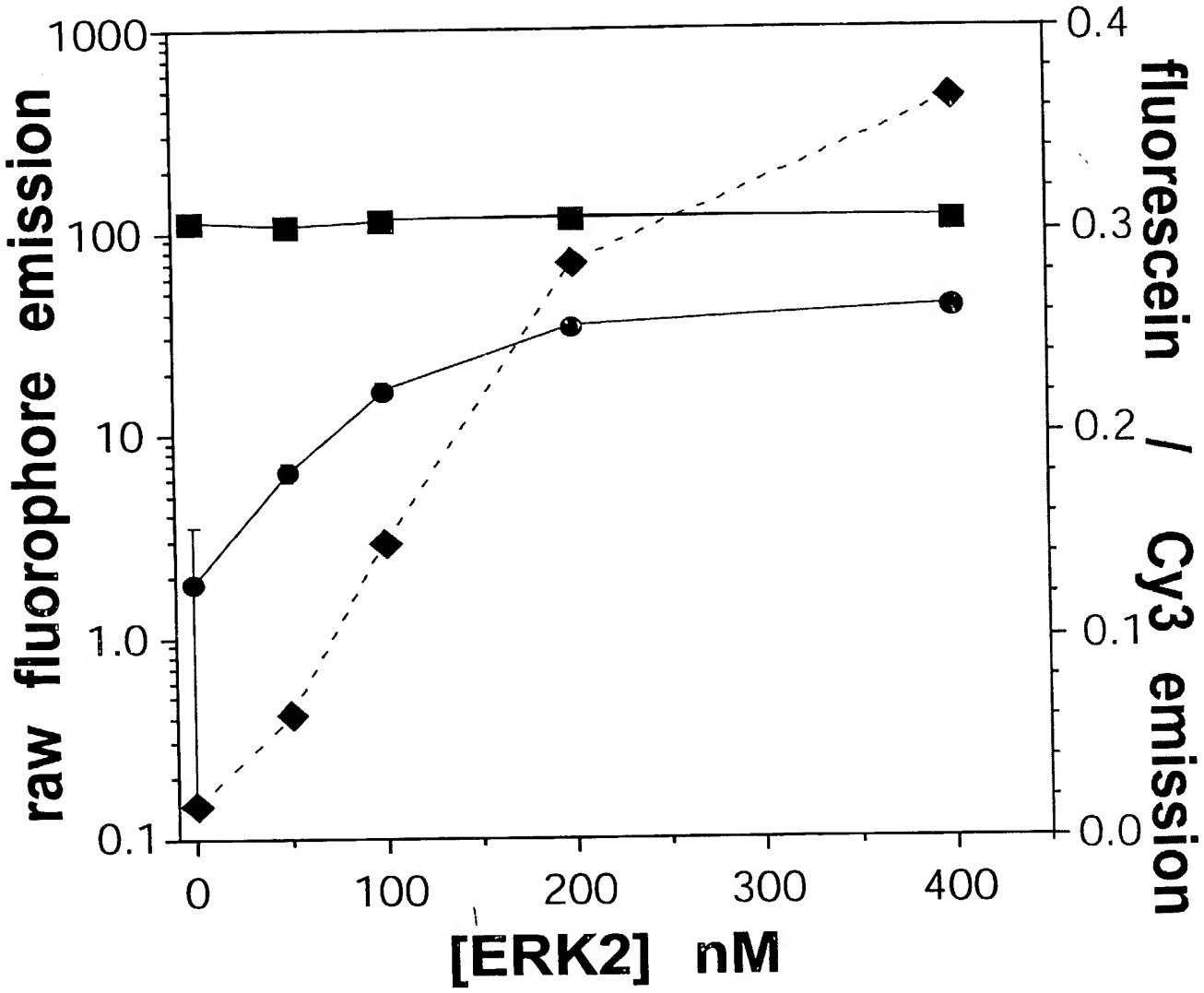
Figure 42A



5'-GGCGUGAC ACGUUCCC (SEQ ID NO: 62)

CGCACUG C UGCAAGG-5' (SEQ ID NO: 61)

Figure 41B


raw fluorophore emission
fluorescein / Cy3 emission
[ERK2] nM
1000
100
10
1.0
0.1
0.4
0.3
0.2
0.1
0.0
0
100
200
300
400